

II. AMENDMENT TO THE CLAIMS:

Claims 1-20: (cancelled)

Claim 21: (currently amended) A continuous loop [system] integrating ~~[white body]~~ virtual simulation model information compiled from disparate sources involved in the development of a mechanical assembly comprising:

disparate sources of ~~[integrating white body]~~ virtual simulation model information distributed among a plurality of design, assembly and simulation testing members of an enterprise task group associated with a the development of a mechanical assembly;

a plurality of work stations, each 1) associated with [each] at least one of the disparate sources of information distributed among the design, assembly and simulation testing members of the task group and 2) located apart from the central master record database;

separate data files and separate program functions stored in a retrievable format assembled in one or more lists ~~[associated with]~~ 1) identifying ~~[defining]~~ a model of a mechanical assembly to be simulated; 2) ~~[specifying]~~ identifying, with respect to the mechanical assembly to be simulated, parts of the mechanical assembly, characteristics of the parts, connections capable of use with the parts, and characteristics of the connections used with the mechanical assembly; and 3) ~~[compiling]~~ identifying virtual data files associated with the parts, connections and characteristics [in a simulation model];

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a central master record database wherein [the] separate data files and separate program functions are maintained, the data files and program functions being accessible by a task group member from a work station upon the selection of a data file and program function from a list;

a network linking the work stations and the central master record database;

one or more menu associated with the lists accessible at a work station

[associated with the lists] for 1) selecting from a list a plurality of parts to be conjoined in a simulation model from the parts in the list; 2) retrieving the data files associated with the parts selected; 3) associating the selected parts and the characteristics of the parts retrieved; 4) selecting [a] one or more connection joining the parts; 5) retrieving the data files from the library associated with the one or more connection selected; 6) associating the characteristics of the one or more connection selected with selected parts in a virtual simulation model wherein the selected parts are to be conjoined by the selected connection; 7) processing the selected parts through a mesh process; 8) saving the assembly mesh data in [a] the central master record database; 9) building the simulation model by associating mesh data with connection data; 10) translating the assembly [ee] as built into a virtual simulation format data record; 11) selecting [performing] a virtual simulation of the mechanical assembly to be evaluated; 12) recording a data record of the characteristics of the simulation model in the virtual simulation; [and] 13) recording the data record of the simulation model and the characteristics of the simulation model determined upon the performance of a virtual simulation and 14) including, upon the completion of a virtual simulation, as [an] a list

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item, ~~[associated with a list such that]~~ the data record of the simulation model and the characteristics of the virtual simulation of the model ~~[become available]~~ for selection and retrieval from a list as a discrete data file record[s] of mesh, assembly, and evaluation characteristics of the simulation model evaluated ~~[accessible at the work stations]~~.

Claim 22: (currently amended) The system of claim 21 further including a continually updated data loop interconnected with ~~[a central library]~~ the central master record database whereby a data file record of the characteristics of the simulation model and the results of the virtual simulation performed upon the simulation model are maintained such that the data file record of the simulation model and the characteristics of the virtual simulation supplant in the list any previous data file record associated with a previous rendition of the simulation model and the characteristics of the ~~[virtual simulation]~~ previous rendition.

Claim 23: (previously presented) The system of claim 22 wherein the data file record of the simulation model includes data concerning crash impact, durability and noise characteristics of the simulation model retrievable at the work stations of the members of the task group associated in an enterprise development of a mechanical assembly.

Claim 24: (previously presented) The system of claim 21 in which selectable data files in the list relating to connections include welds, bonds, bolts, sealers, adhesives, pin joints and ball joints.

Claim 25: (currently amended) The system of claim 21 wherein a menu associated with the work stations includes a program function associated with a mesh part database for identifying simulation models ~~[in the groups of existing models and probable developments whereby a simulation model identified among the models in the groups may be selected]~~ for selection from the lists.

Claim 26: (currently amended) The system of claim 22 wherein a work station includes a limited menu restricting access of the work station to one or more combined functions selected from the group of: 1) selecting a plurality of parts and retrieving the data files associated with the parts selected; 2) associating with the mechanical assembly the selected parts and the characteristics of the parts retrieved; 3) selecting a connection and retrieving the data files from the library associated with the connection; 4) associating the characteristics of the connection selected with selected parts in a simulation model in which the selected parts are to be conjoined and processing the associated connections and parts through a mesh process; 5) saving the mesh process data in a database, building the mechanical assembly and translating the assembly into a virtual simulation format data record; 6) performing a virtual simulation of the simulation model, recording a data record of the characteristics of the simulation; and 7)

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compiling the data record of the simulation model and the characteristics of the virtual simulation in a format retrievable ~~[from]~~ as a [list] listed item in the central master record database.

Claim 27: (previously presented) The system of claim 21 wherein the lists are maintained in a central master file database that includes parts data records associated with CAD data, mesh data, connection data, assembly data, stock data, and evaluation data.

Claim 28: (previously presented) The system of claim 21 wherein the work stations associated in the network are singly identifiable with task group members separately involved in design, assembly and simulation testing of a designated simulation model.

Claim 29: (currently amended) A continuous loop ~~[data management system]~~ for ~~[designing, assembling and simulating]~~ refining the design of a mechanical model in a virtual format from the beginning of a design process to the end of a design process for a designated mechanical assembly comprising:

a library maintained in a central master file database that includes, selectable from a list, parts data records, CAD data, mesh data, connection data, assembly data, stock data, and evaluation data;

a plurality of work stations each work station located apart from the central master file database, the work stations interconnected with the library in a network wherein the work stations are singly identifiable with task group members separately

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involved in a separate function ~~[functions-related to]~~ involved with the design, assembly and simulation testing of the designated mechanical assembly;

a limited menu at each work station restricting a member's access to a work station ~~[to one or more functions selected from]~~ dependent upon a member's association with a ~~[the groups of]~~ design, assembly ~~[and]~~ or simulation group, the functions associated with the list items comprising: 1) selecting a plurality of parts and retrieving the data files associated with the selected parts from the library; 2) associating the selected parts and the characteristics of the parts retrieved with the mechanical assembly; 3) selecting a connection from the library and retrieving the data files from the library associated with the connection; 4) associating the characteristics of the connection selected with the selected parts that are to be conjoined in a model and processing the associated connection and parts through a mesh process to provide an assembly mesh; 5) saving data associated with the assembly mesh in a database, building the model and translating the model into a virtual simulation format data record; 6) performing a virtual simulation of the model, recording a data record of the characteristics of the simulation; ~~[and]~~ 7) returning the data record of the model and the characteristics of the virtual simulation of the model to the library; and 8) replacing any prior record of the mechanical assembly simulated with a record of the model and the characteristics of the virtual simulation of the model processed upon the completion of a virtual simulation

~~[whereby upon the return of a data file record of the characteristics of the model processed in accordance with one or more of the selected functions, the data file record~~

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~~of the model as processed supplants any previous data file record in the library associated with the model corresponding to the designated mechanical assembly).~~

Claim 30: (previously presented) The system of claim 29 wherein after a simulation of the model approved by one or more member of the task group, the design and assembly characteristics of the model are fixed as a final design of the designated mechanical assembly in the library.

Claim 31: (previously presented) The system of claim 21 wherein, in the process of building the assembly by associating mesh data with connection data relating to the manner in which conjoined parts are welded in the assembly, imperfections in the mesh are identified and fixed.

Claim 32: (previously presented) The system of claim 31 wherein, in the process of building the assembly by associating mesh data with connection data relating to the manner in which conjoined parts are welded in the assembly, imperfections in the mesh are identified and fixed.